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EXAMINER	
STOCKTON, LAURA LYNNE	
ART UNIT	PAPER NUMBER
1626	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/519,219	VENKATESWARLU ET AL.	
	Examiner	Art Unit	
	Laura L. Stockton	1626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,15-23 and 26-31* is/are pending in the application.

4a) Of the above claim(s) *28 and 29* is/are withdrawn from consideration.

5)☒ Claim(s) *1-4, 26, 30 and 31* is/are allowed.

6)☒ Claim(s) *5-13,15-23 and 27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-13, 15-23 and 26-31 are pending in the application.

Election/Restrictions

Applicant's election with traverse of Group I (claims 1-4 and 26 - directed to products) in the reply filed on April 3, 2007 was acknowledged in a previous Office Action. The requirement was deemed proper and therefore made FINAL in a previous Office Action.

Claims 5-13, 15-23 and 27-29 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention(s), there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on April 3, 2007.

Claims 1-4, 26, 30 and 31 are directed to an allowable product. Pursuant to the procedures set forth in MPEP § 821.04(b), claims 5-13, 15-23 and 27, directed to the process of making or using the allowable product, previously withdrawn from consideration as a result of a restriction requirement, are hereby rejoined and fully examined for patentability under 37 CFR 1.104. Claims 28 and 29, directed to the invention(s) of Groups X and XI do not require all the limitations of an allowable product claim, and have NOT been rejoined.

Because a claimed invention previously withdrawn from consideration under 37 CFR 1.142 has been rejoined, **the restriction requirement between groups I-V, VIII and IX as set forth in the Office action mailed on January 13, 2007 is hereby withdrawn.** In view of the withdrawal of the restriction requirement as to the rejoined inventions, applicant(s) are advised that if any claim presented in a continuation or divisional

application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application. Once the restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Rejections and objections made in the previous Office Action that do not appear below have been overcome by Applicant's amendments to the claims. Therefore, arguments pertaining to these rejections will not be addressed.

Claim Objections

Claim 23 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 7-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 7-13 are drafted in terms of "use", however "use" is not one of the statutory classes of invention. *Clinical Products v. Brenner*, 149 USPQ 475, 476 (1966).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 5-10, 12, 13 and 15-17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for treating anxiety, psychotic depression and excess weight, does not reasonably provide enablement for prevention or treatment of all convulsive disorders, obsessive disorders, cognitive memory disorders, ADHD, personality, gastrointestinal disorders, sleep disorders, etc. embraced by the claims. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

In *In re Wands*, 8 USPQ2d 1400 (1988), factors to be considered in determining whether a disclosure meets

the enablement requirement of 35 U.S.C. § 112, first paragraph, have been described. They are:

1. the nature of the invention,
2. the state of the prior art,
3. the predictability or lack thereof in the art,
4. the amount of direction or guidance present,
5. the presence or absence of working examples,
6. the breadth of the claims,
7. the quantity of experimentation needed, and
8. the level of the skill in the art.

The nature of the invention

Applicant is claiming methods for treating, preventing or prophylaxis of numerous conditions by administering a compound of formula (I). See, for example, instant claim 8.

The state of the prior art and the predictability or lack thereof in the art

While treating excess weight, anxiety and depression has been strongly linked to 5HT2c agonism

remaining uses such as sexual dysfunction, Alzheimer's Disease (AD), etc. have not. see Gaster {Annual Reports in Medicinal Chemistry, Vol. 33 (1998), pages 21-30} and Isaac {Bioorganic & Medicinal Chemistry Letters, Vol. 10 (2000), pages 919-921}. Note the Nitsch et al. {Journal of Biological Chemistry, Vol. 271, (1996), pages 4188-4194} is at best speculative for treating AD as it discusses possible sources for the neurotransmission damage observed in AD brains.

Withdrawal from drug abuse include habitual use of any chemical substance, caffeine, alcohol, inhalants, prescription drugs as well as illegal substances, heroin, crack, LCD, PCP, ecstasy and many others. Addiction to barbiturates, alcohol, cocaine, opiates, amphetamines, benzodiazepines, nicotine, etc. all involve different parts of the CNS system, i.e. different receptors in the body. For example, cocaine also binds at the dopamine re-uptake site. Heroin addiction, for example, arises from binding at the

opiate receptors, cigarette addiction from some interaction at the nicotinic acid receptors, many tranquilizers involve the benzodiazepine receptor, alcohol involves yet another system, etc. All attempts to find a pharmaceutical to treat chemical addictions generally have thus failed. Thus the bare assertion that instant compounds are useful for treating any and all types of withdrawal from drug abuse is not plausible. Where the utility is unusual or difficult to treat or speculative, the Examiner has authority to require evidence that tests relied on are reasonably predictive of *in vivo* efficacy by those skilled in the art. See for example, *In re Ruskin,* 148 USPQ 221; *Ex parte Jovanovics*, 211 USPQ 907. Also, note the criteria for enablement as set out in *In re Wands*, cited in MPEP 2164.01(a), August 2000 edition.

Applicant also claims, for example, the treatment of sleep disorders in general, but the nature of sleep disorders vary one from the other. Sleep disorders are

any disorders that are related to sleeping. Sleep problems can affect a person's physical health, daily activities, and mental health. Sleep disorders are medical conditions that can potentially be serious. Common sleep disorders include:

Sleep apnea - People with sleep apnea stop breathing for a very short time many times during the night. Its main symptoms are loud snoring and feeling sleepy during the day. People with this disorder don't get enough restful sleep at night, making it hard for them to function during the day. Sleep apnea can lead to high blood pressure, heart failure, heart attack, and stroke.

Narcolepsy - When a person has narcolepsy, brain messages about when to sleep and when to be awake get mixed up. This can make a person fall asleep when they don't want to, often without any warning like feeling drowsy. If not controlled with medication, this disorder can cause serious problems in a person's

personal, social, and work life. It can also limit a person's activities, such as driving a car, work, and exercising. This disorder may run in families.

Restless legs syndrome - A person with this disorder can have unpleasant feelings or sensations in the legs, mostly in the calves or lower legs. In some cases, the arms may also be affected. These feelings are often described as creeping, crawling, tingling, pulling, or painful. This disorder can be hard to diagnose and is sometimes mistaken for nervousness, insomnia stress, or arthritis. It seems to affect women more often than men.

Insomnia - People with insomnia have trouble falling asleep or staying asleep during the night. They can wake up often during the night and have difficulty getting back to sleep, or they can wake up too early in the morning. Sleep does not feel satisfying when a person has insomnia. A person can feel sleepy, tired, and irritable during the day and have trouble focusing

on tasks. Sleep disorders also cover such as snoring. Since sleep disorders are extremely broad in nature and vary in nature as shown above, the enablement rejection is proper.

Applicant claims a method of treating gastrointestinal disorders(GI), but there is no enablement in the specification for such a scope. Gastrointestinal disease includes diseases of the esophagus (e.g. Achalasia, gastroesophageal reflux disease), diseases of the stomach and duodenum (e.g. gastritis) and the rest of the digestive system, which includes the GI itself plus three digestive organs (spleen, pancreas and liver). It also includes inflammatory bowel disease, infectious disease of the intestines, malabsorption, surgical non-neoplastic disease of the GI tract, tumors of the GI tract, Barrett's Oesophagus, Chronic Hepatitis, Cirrhosis, Coeliac Disease, Colorectal Cancer, Collagenous colitis, Colorectal Polyps, Crohn's Disease,

Diverticulosis and Diverticulitis, Fatty Liver, Gastric Cancer, Gallstones, Haemochromatosis, Helicobacter pylori infection, Irritable Bowel Syndrome, Liver Failure and Liver Transplantation, Lymphocytic colitis, Microscopic colitis, Oesophageal Cancer, Pancreatitis, Peptic Ulcers, Primary Biliary Cirrhosis (PBC), Reflux Oesophagitis, Ulcerative Colitis, Viral Hepatitis, etc. As shown by Thomas A. Godwin (GASTROINTESTINAL DISEASES, http://edcenter.med.cornell.edu/CUMC PathNotes/Gastrointestinal/Gastrointestinal.html, August 2004, 51 pages), the nature of the gastrointestinal disease and gastrointestinal conditions are extremely different one from the other. To this day, no one was able to treat gastrointestinal disease and gastrointestinal conditions with a single drug.

The claimed invention is pharmaceutical in nature. It is well established that "the scope of enablement varies inversely with the degree of unpredictability of

the factors involved" and the physiological activity is generally considered to be unpredictable.

The amount of direction or guidance present and the presence or absence of working examples

There is no evidence of record, which would enable the skilled artisan in the identification of the people who have the potential of becoming afflicted with the numerous diseases or disorders claimed herein. That a single class of compounds can be used to treat, control or prevent all diseases embraced by the claims is an incredible finding for which Applicant has not provided supporting evidence. Applicant has not provided any competent evidence or disclosed tests that are highly predictive for the pharmaceutical use for treating, controlling or preventing any or all conditions by administering the instant claimed compounds.

The breadth of the claims

The breadth of the claims is the treatment, prevention or prophylaxis of conditions is generically embraced in the claim language.

The quantity of experimentation needed

The nature of the pharmaceutical arts is that it involves screening *in vitro* and *in vivo* to determine which compounds exhibit the desired pharmacological activities for each of the diseases and disorders instantly claimed. The quantity of experimentation needed would be undue when faced with the lack of direction and guidance present in the instant specification in regards to testing all conditions generically embraced in the claim language, and when faced with the unpredictability of the pharmaceutical art. Thus, factors such as "sufficient working examples", "the level of skill in the art" and predictability, etc. have been demonstrated to be

sufficiently lacking in the instant case for the instant method claims.

The level of the skill in the art

Even though the level of skill in the pharmaceutical art is very high, based on the unpredictable nature of the invention and state of the prior art and lack of guidance and direction, one skilled in the art could not use the claimed invention without undue experimentation.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-13, 15-23 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5 and 6 are of indeterminate scope for more than one reason. Defining a disease(s) by its (their) underlying cause renders the scope of the intended uses indeterminate since the claim language may read on diseases not yet known to be caused by or affected by such action or in ways not yet understood. Additionally, determining whether a given disease responds or not to such a mode of action involves much experimentation since a negative response from one patient does not mean the drug is not useful as no drug has 100% effectiveness. Thus, what "success rate" determines if a particular compound is effective and how many patients (and dosage regimens) need to be tested. The test for determining compliance with 35 USC 112, second paragraph, is whether Applicant has clearly defined “their” invention not what may be discovered by future research as this type of claim language clearly requires.

Claims 5 and 6 are indefinite because these claims are directed to a method for modulating 5-HT receptor function since it is not clear how the receptor is affected by such modulation nor how a mammal could be treated by this method. Further, it is not clear what the mammal is suffering from to require treatment.

In claims 7 and 8, it is not possible to treat and prevent at the same time.

Claims 7-13 and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: in claim 7, for instance, is the compound being used by administering the compound for the stated pharmaceutical purpose? In claim 19, there are no steps listed which indicate the reactants being used to produce a compound of formula (I).

In claim 20, under the definition of R_{13} and R_{14}, the phrase "and may represent either linear or branched

carbon chain", near the end of the claim, is unclear as to its meaning and/or what it is defining (i.e., What may represent either a linear or branched carbon chain?). See claim 21 for same.

Claim 22 is indefinite because it is not clear what reagents/reactants are used in the process to chemically or catalytically reduce the =C(O) in the side chain of a compound, nor what is the compound (i.e., what is the structure?). Further, simply stating compounds containing =C(O) in the side chain does not allow for the metes and bounds of the claims to be met.

Claims must, under modern claim practice, stand alone to define an invention, and incorporation into claims by express reference to the specification is not permitted. *Ex parte Fressola*, 27 USPQ 2d 1608 (1993). Therefore, claims 22 and 27 are indefinite because these claims do not contain formula (I), formula (II) nor formula (III).

In claim 23, the phrase "comprising of carrying" should be changed to "comprising carrying".

Claim 23 lacks antecedent basis from claims 19-22 because protecting groups and prodrugs are not embraced by claims 19-22.

Allowable Subject Matter

Claims 1-4, 26, 30 and 31 are allowed over the art of record.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

This application contains claims 28 and 29 drawn to an invention nonelected with traverse in the reply filed on April 3, 2007. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura L. Stockton whose telephone number is (571) 272-0710. The examiner can normally be reached on Monday-Friday from 6:15 am to 2:45 pm. If the examiner is out of the Office, the examiner's supervisor, Joseph McKane, can be reached on (571) 272-0699.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the

automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

The Official fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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April 24, 2009